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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,563	08/02/2001	Ichiro Aminori	012777-043	4585

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EXAMINER	
HON, SOW FUN	

ART UNIT	PAPER NUMBER
1772	

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	**Application No.** 09/890,563	**Applicant(s)** AMIMORI ET AL.
	Examiner Sow-Fun Hon	**Art Unit** 1772

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 16 July 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

PERIOD FOR REPLY [check either a) or b)]

a) ☒ The period for reply expires *4* months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

   (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

   (b) ☐ they raise the issue of new matter (see Note below);

   (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

   (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: *See attachment to advisory action*.

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

   The status of the claim(s) is (or will be) as follows:

   Claim(s) allowed: *None*.

   Claim(s) objected to: *None*.

   Claim(s) rejected: *1-13*.

   Claim(s) withdrawn from consideration: *None*.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☒ Other: *Attachment to advisory action*

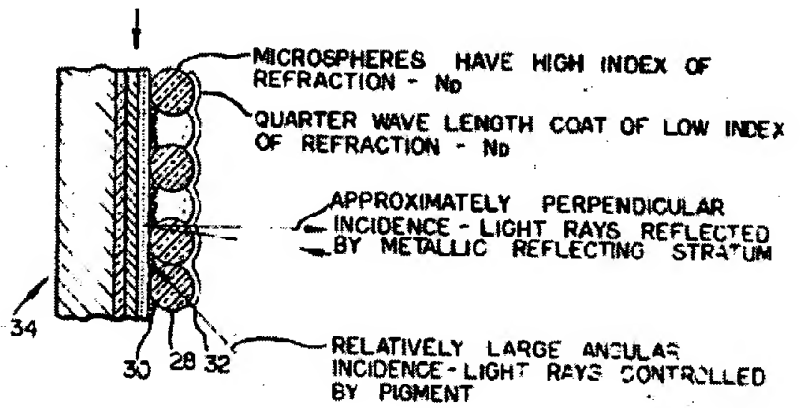
Attachment to Advisory Action

1. The amendment which reflects the narrowing definition of Applicant's film as presented in Applicant's arguments dated 11/28/03 has been entered.

2. The request for reconsideration has been fully considered and deemed unpersuasive. Applicant's arguments are addressed below.

3. Applicant argues that Altman simply arranges the particles on top of the tacky adhesive layer whereas the particles of Applicant are dispersed in the hardcoat layer.

Applicant is respectfully apprised that the claim limitation of "particles of particle size … that is larger than the thickness of the hard coat layer thereby providing a concavo-convex structure" does not preclude the arrangement of Altman below, whereby the particles appear to be partially embedded in the adhesive (dark shade).



Although the adhesive layer of Altman is tacky, the adhesive (binder) layer of Oka, the primary reference, is a hardcoat, an example being an epoxy resin ('152, column 13, lines 35-45). Epoxy resins are notoriously well known hard-coat adhesives which become tacky during the curing process prior to hardening. The adhesive functions as a binder for the particles.

4. Applicant argues that the ultrafine particle layer should have a thickness of about 30 nm to 150 nm, which is why it is necessary to use ultrafine particles of a size of not more than 200 nm in Oka.

Applicant is respectfully apprised that Oka does not teach that it is necessary to use ultrafine particles of a size of not more than 200 nm because the ultrafine particle layer should have a thickness of about 30 nm to 150 nm. Oka teaches that the optimal thickness of the antireflection film is about 100 nanometers (0.1 micron) (column 3, lines 30-35), and that the particles can be partly embedded in the hardcoat layer (column 2, lines 35-40), wherein a portion of said particles are exposed on said surface of said hard coat layer (column 55, lines 50-55).

5. Applicant argues that it is clear that Altman does not contemplate an antireflection film but instead a type of screen having an antireflection function to prevent the reflection of undesired light other than the objective projected image, wherein there is a metal layer under the particle layer to reflect the light.

Applicant is respectfully apprised that Oka is the primary reference which teaches the antireflection film, and that Altman is the secondary reference which teaches the particle size of 1 to 50 μm (microns) in diameter (column 5, lines 55-60) that encompasses the claimed range of 1 to 10 μm.

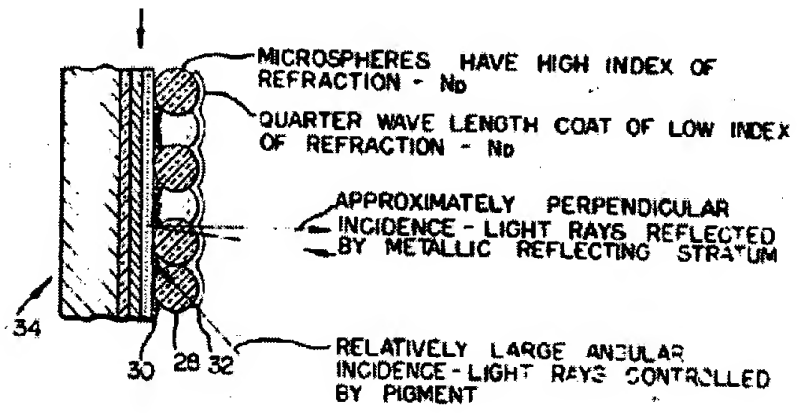
Altman teaches that the particles (microspheres) each serve as a lens to focus all light incident upon it at a point which is adjacent to the apex of its inner surface, the resulting rays diverging in an amount which is controlled by the index of refraction of the particles (column 6, lines 1-5). Altman thus provides the motivation to use the larger particles of 1 to 10 μm in place

of the ultrafine particles in the invention of Oka et al. in order to obtain a concave-convex matt surface which provides the desired lens control of light rays.

6. Applicant argues that the particles of Altman are composed of larger glass microspheres and smaller pigment microspheres, thus failing to teach uniformity of particle size.

Applicant is respectfully apprised that the term "contains" is equivalent to the term "comprises" which is open-ended. Thus the presence of another set of microspheres is not excluded.

In the instant case, Altman teaches a monolayer (column 2, lines 10-20) of refracting microspheres in one embodiment seen below:



In the embodiment, it can be seen that there is no variation in size for the refracting microspheres which have a particle size larger than the thickness of the adhesive layer.

Altman distinguishes between the set (range) of larger microspheres and the set (range) of smaller microspheres (column 2, lines 70-75). The term "contains" in the claim language does not exclude the presence of another set of microspheres which have a particle size smaller than the thickness of the adhesive layer.

7. Applicant argues that Altman does not contemplate an antireflection film, but instead a type of screen having an antireflection function to prevent the reflection of undesired light other

than the objective projected image, and that the screen reflects the light coming from the front, to show it as an image, which is why there is a metal layer under the particle layer to reflect the light (whereas Oka teaches an antireflection film). Applicant argues that since the objectives and products of Oka are different from those of Altman, that there is no motivation to combine.

Applicant is respectfully apprised that Oka is the primary reference which teaches that the optimal thickness of the antireflection film is about 100 nanometers (0.1 micron) (column 3, lines 30-35), and that the particles can be partly embedded in the hardcoat layer (column 2, lines 35-40), wherein a portion of said particles are exposed on said surface of said hard coat layer (column 55, lines 50-55).

Altman, as, the secondary reference, teaches that the particles (microspheres) each serve as a lens to focus all light incident upon it at a point which is adjacent to the apex of its inner surface, the resulting rays diverging in an amount which is controlled by the index of refraction of the particles (column 6, lines 1-5). This teaching provides the motivation to use particles of 1 to 10 μm in size which are larger than the thickness of the hard coat layer in place of the partly embedded ultrafine particles in the invention of Oka et al. in order to obtain the desired lenticular (lens) control of light rays.

8. Applicant argues that the Viscoat 8F in Example 5A of Oka has a coefficient of kinetic friction of larger than 0.20.

Applicant is respectfully requested to provide supporting evidence for the statement.

Furthermore, Applicant is respectfully apprised that irrespective of the mechanism of lubrication, a compound which is lubricious has a low coefficient of kinetic friction, otherwise it would not be described as being lubricious.

9. Applicant argues that present claim 13 specifies a density of particles in the range of 100 to 5000 particles/m^2, wherein the surface coverage of the particles ranges from $1.4x10^{-7}$ to $7.7x10^{-6}$ % when the particle diameter is 3 to 7 microns and the particle density is 200 to 2000 particles/m^2, and that Altman discloses that at least 90% of the surface is covered by particles.

Applicant is respectfully apprised that as discussed above, the term "contains" is open-ended and does not preclude more than one set of particles, wherein the set of particles which have a size larger than the thickness of the adhesive layer in the anti-reflective film of Altman can have a density in the range of in the range of 100 to 5000 particles/m^2 which is within the realm of routine experimentation.

10. Applicant argues that Palmquist discloses that the sheet has 10,000 particles per square inch when particles having an average diameter in the range of 3 to 6 mils are used, which translates into 1.5×10^7 particles, remarkably larger than the particle density of the present application.

Applicant is respectfully apprised that Palmquist does teach a lower limit of several hundred per square inch (2b, lines 70-75) such that the claimed density range of 100 to 5000 particles/m^2 is within the realm of routine experimentation. A showing of unexpected results needs to be provided.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Hon.

Sow-Fun Hon

07/27/04

/Harold Pyon/

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

7/29/04